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- (f) If a power, thrust, or a fuel control (other than a mixture control) incorporates a fuel shutoff feature, the control must have a means to prevent the inadvertent movement of the control into the off position. The means must—
- (1) Have a positive lock or stop at the idle position; and
- (2) Require a separate and distinct operation to place the control in the shutoff position.
- (g) For reciprocating single-engine airplanes, each power or thrust control must be designed so that if the control separates at the engine fuel metering device, the airplane is capable of continued safe flight and landing.

[Amdt. 23–7, 34 FR 13095, Aug. 13, 1969, as amended by Amdt. 23–17, 41 FR 55465, Dec. 20, 1976; Amdt. 23–29, 49 FR 6847, Feb. 23, 1984; Amdt. 23–43, 58 FR 18974, Apr. 9, 1993; Amdt. 23–51, 61 FR 5137, Feb. 9, 1996]

§23.1145 Ignition switches.

- (a) Ignition switches must control and shut off each ignition circuit on each engine.
- (b) There must be means to quickly shut off all ignition on multiengine airplanes by the grouping of switches or by a master ignition control.
- (c) Each group of ignition switches, except ignition switches for turbine engines for which continuous ignition is not required, and each master ignition control must have a means to prevent its inadvertent operation.

[Doc. No. 4080, 29 FR 17955, Dec. 18, 1964; 30 FR 258, Jan. 9, 1965, as amended by Amdt. 23–18, 42 FR 15042, Mar. 17, 1977; Amdt. 23–43, 58 FR 18974, Apr. 9, 1993]

§23.1147 Mixture controls.

- (a) If there are mixture controls, each engine must have a separate control, and each mixture control must have guards or must be shaped or arranged to prevent confusion by feel with other controls.
- (1) The controls must be grouped and arranged to allow—
- (i) Separate control of each engine; and
- (ii) Simultaneous control of all engines.
- (2) The controls must require a separate and distinct operation to move the

control toward lean or shut-off position.

(b) For reciprocating single-engine airplanes, each manual engine mixture control must be designed so that, if the control separates at the engine fuel metering device, the airplane is capable of continued safe flight and landing.

[Doc. No. 4080, 29 FR 17955, Dec. 18, 1964, as amended by Amdt. 23–7, 34 FR 13096, Aug. 13, 1969; Amdt. 23–33, 51 FR 26657, July 24, 1986; Amdt. 23–43, 58 FR 18974, Apr. 9, 1993]

§ 23.1149 Propeller speed and pitch controls.

- (a) If there are propeller speed or pitch controls, they must be grouped and arranged to allow—
- (1) Separate control of each propeller; and
- (2) Simultaneous control of all propellers.
- (b) The controls must allow ready synchronization of all propellers on multiengine airplanes.

§23.1153 Propeller feathering controls.

If there are propeller feathering controls installed, it must be possible to feather each propeller separately. Each control must have a means to prevent inadvertent operation.

 $[\mathrm{Doc.\ No.\ 27804,\ 61\ FR\ 5138,\ Feb.\ 9,\ 1996}]$

§23.1155 Turbine engine reverse thrust and propeller pitch settings below the flight regime.

For turbine engine installations, each control for reverse thrust and for propeller pitch settings below the flight regime must have means to prevent its inadvertent operation. The means must have a positive lock or stop at the flight idle position and must require a separate and distinct operation by the crew to displace the control from the flight regime (forward thrust regime for turbojet powered airplanes).

[Amdt. 23-7, 34 FR 13096, Aug. 13, 1969]

§ 23.1157 Carburetor air temperature controls.

There must be a separate carburetor air temperature control for each engine.